

In Re Patent Application of:
KHOURI ET AL.
Serial No: NOT YET ASSIGNED
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In the Claims:

This listing of claims replaces all prior versions and listing of claims in the application.

Claims 1-12 (cancelled).

13. (new) A non-volatile memory device comprising:
a memory cell matrix including a plurality of sectors;
and

a remapping circuit for remapping defective sectors of the memory cell matrix, defective sectors comprising sectors having at least one defective cell, the remapping circuit comprising

first memory elements containing defective sector addresses, and

corresponding second memory elements containing replacement sector addresses.

14. (new) A non-volatile memory device according to Claim 13, wherein said remapping circuit comprises a content addressable memory (CAM) unit.

15. (new) A non-volatile memory device according to Claim 14, further comprising a multiplexer unit connected downstream from and in data communication with said CAM unit.

16. (new) A non-volatile memory device according to Claim 15, wherein said multiplexer unit is associated to and in data communication with the memory cell matrix.

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17. (new) A non-volatile memory device according to Claim 16, wherein said CAM unit comprises a non volatile memory.

18. (new) A non-volatile memory device according to Claim 16, wherein said CAM unit comprises a volatile memory which is activated when the memory device is activated.

19. (new) A non-volatile memory device according to Claim 13, wherein the plurality of sectors comprises a higher number of sectors than a nominal capacity of the memory device.

20. (new) A non-volatile memory device comprising:
a memory cell matrix including memory cells divided into a plurality of sectors; and
a remapping circuit for remapping defective sectors of the memory cell matrix, defective sectors comprising sectors having at least one defective cell.

21. (new) A non-volatile memory device according to Claim 20, wherein said remapping circuit comprises a content addressable memory (CAM) unit including
first memory elements containing defective sector addresses, and
corresponding second memory elements containing replacement sector addresses.

22. (new) A non-volatile memory device according to Claim 21, further comprising a multiplexer connected to said CAM unit.

23. (new) A non-volatile memory device according to

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Claim 22, wherein said multiplexer is in communication with the memory cell matrix.

24. (new) A non-volatile memory device according to Claim 21, wherein said CAM unit comprises a non volatile memory.

25. (new) A non-volatile memory device according to Claim 21, wherein said CAM unit comprises a volatile memory.

26. (new) A non-volatile memory device according to Claim 20, wherein the plurality of sectors comprises more sectors than a nominal capacity of the memory device.

27. (new) A method for restoring a non-volatile memory including a memory cell matrix having memory cells divided into a plurality of sectors, the method comprising:

detecting defective sectors of the device, the defective sectors comprising sectors having at least one defective memory cell;

storing an address of the defective sector; and

providing a pre-programmed address of a replacement sector to replace the defective sector with the replacement sector among the plurality of sectors of the memory cell matrix.

28. (new) A method according to Claim 27, wherein detecting a defective sector comprises detecting with a sector remapping circuit.

29. (new) A method according to Claim 28, wherein the sector remapping circuit comprises a content addressable memory (CAM) unit.

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30. (new) A method according to Claim 27, wherein a multiplexer unit replaces the defective sector with the replacement sector.

31. (new) A method for remapping a non-volatile memory including a memory cell matrix having memory cells divided into a plurality of sectors, the method comprising:

detecting defective sectors of the device, the defective sectors comprising sectors having at least one defective memory cell; and

replacing addresses of the defective sectors with addresses of replacement sectors.

32. (new) A method according to Claim 31, wherein detecting a defective sector comprises detecting with a sector remapping circuit.

33. (new) A method according to Claim 32, wherein the sector remapping circuit comprises a content addressable memory (CAM) unit.

34. (new) A method according to Claim 31, wherein a multiplexer unit replaces the address of the defective sector with the address replacement sector.